



Diagonal Test Laboratory P3

Measurement	Normalized flanking level difference, vibration reduction index of junctions, sound insulation, normalized flanking impact sound level
Standard	DIN EN ISO 10848, DIN EN ISO 10140
Objects to be measured	Separating walls (massive, masonry, lightweight), additional lining, interior insulation, thermal insulation composite systems (ETICS), wall connection and joints, access floors, ventilation and air-conditioning systems
Technical data	
Room volume (4 rooms)	276,6 m ³ (total)
Entrance doors (H x W)	2,00 m x 0,83 m and 2,03 m x 1,94 m
Dimensions of test opening (H x W)	2,95 m or 3,10 m height and up to 11,00 m length
Max. sound reduction (related to the max. size of test sample)	$R_{\max,w} = 81$ to 83 dB (depending on transmission path)

More information

- The test laboratory consists of four adjacent rooms at one level (e.g. two rooms in adjacent apartments with partition between the apartments. Flexible circular barrier layers are between the rooms with walls of 20 cm thick steel concrete.
- Investigation of flanking sound transmission for all horizontal propagation paths (vibration reduction index for paths Dd, Fd, Df and Ff as well as air-borne sound transmission in through, longitudinal and diagonal direction.
- Simulation of customary installation situations and specific constructions.
- Reduced flanking transmission of test facility.
- Pneumatically movable loudspeaker in the source room and in receiving room.
- Compressed air available.
- Water connection and electric power available.

The support-free execution of the crosswise divided ceiling is of large advantage for the installation of objects and also for measuring. In this way flanking walls with a total length of up to 11 m can be tested with variable arrangement of the partition walls, side walls and nodal point construction.

The test facility consists of four sections, separated by gaps. Depending on the wall construction the test facility can be used for the determination of the standardized flanking transmission of building elements, as well as wall test facility without flanking transmission.

Horizontal section of diagonal test laboratory

